Maine Department of Agriculture, Food and Rural Resources
Specialty Crop Block Grant Program

USDA AMS Agreement Number

Specialty Crop Agreement No. 12-25-B-0927

Type of Report

Final Performance Report

Point of Contact

John Harker
Director of Market Development
Division of Agriculture Resource Development
207-287-7620
John.harker@maine.gov

Date of Report

December 26, 2012
(Revised 1-18-2013)

Contents

Project Title: Supporting SCP through GAP/GHP Certification Preparation

Project Summary

Many Maine Specialty Crop Producers have been transitioning from Safe Food Handling Techniques to the more demanding process of GAP/GHP certification as their markets value and demand it. AgMatters LLC worked to introduce Safe Food Handling Techniques to Maine farmers with the support of a previous Maine Specialty Crop Grant, and helped growers to become GAP/GHP certified. This work included publicizing the service, one-on-one meetings with farmers, site visits, looking at the farm from an outside view, and using phone calls, emails, and snail mail to support the process. The objective of this project was GAP/GHP certification of 20 farms per year. (40 farms total). This included recertification, new certification, or increased certification levels for farms. In 2010, 30 farms received GAP/GHP certification. In 2011, 35 farms received GAP/GHP certification. In total, over 75 farmers were worked with on getting GAP certified.

Project Approach

AgMatters LLC created and updated, as needed, all materials growers needed to create their own Food Safety Plan and be prepared for GAP/GHP audits. We performed a lot of outreach to make growers aware of the services we provide. We held large group meetings at the Maine Agricultural Trade Show in January 2011 and 2012. We spoke at the Maine Vegetable and Small Fruit Association meetings, The Maine Pomological Society, the Maine Sustainable Agriculture Society, Wild Blueberry meetings, and Rick Grant's Twilight Grower Meeting, amongst other meetings. We also had articles published in the Maine Organic Farmer's and Gardener's Association newsletter, and several other farm related Maine publications.
We created our own materials and had hard copies available to mail or bring to growers. We also put the materials on cds, and we hosted them on our web site (www.agmattersllc.com) which allowed them to be downloaded and then personalized to fit each different operation.

Most interactions with growers involved several phone calls and or emails and at least one site visit which took two hours on average. We found this to be an excellent method of support for growers. We maintained an email directory of over 65 growers and sent out updates, the latest news in the world of food safety and materials that we hoped growers will find useful.

The Maine Vegetable and Small Fruit Growers Association supported us in this project by including us in programs of each of their annual and Twilight meetings and allowing us as much time as needed to answer grower questions. The majority of the members worked with us on Food Safety issues in the last four years. The Maine Pomological Society and the Maine Sustainable Agriculture Society have also been very supportive of our efforts and have helped us to network with their growers as well as hosting us at their meetings.

Timetable of Work Performed

2010

In November and December we created the Food Safety Plan template, and collected articles growers need on using bleach as a sanitizer, getting and taking water tests, controlling wild life, and we worked with 4 growers and assisted them as they became GAP/GHP certified.

2011

In the spring of 2011 we created a document to help growers think about what they needed to be doing in preparation for their certification this year—what to do before planting, after planting, and before harvest, as well as what they could be doing during the winter months to prepare their packing facilities for certification. We also made a simple mock audit form as well as updated the Food Safety Plan template we created and distribute.

We worked with over 40 Maine growers by phone, email, and one-on-one meetings in addition to speaking at various meetings about the grant. Growers know that we will answer whatever their questions are and research queries we are unsure of.

2012

We updated the Food Safety Plan in June. We spoke at the Maine Agricultural Trade Show, at the Maine Sustainable Agriculture Meeting, at the Maine Pomological Meeting, at two Farm Bureau meetings in Jonesport, at Twilight meetings; and have been contacted by growers who initially got GAP/GHP certification, but whose markets are now demanding more "global" certification. We never refused a request for help and are learning, as well as the growers, more about Harmonize GAP, Global Gap, and other audit specific programs. We wrote a grant for 2013 that was funded to assist growers with all of these audits, as well as GAP/GHP. In 2012 we worked with more potato farmers from Aroostook County.

We also collected data on each client including their level of certification at the beginning of the project and their level of certification at the end of the project. (See attached additional information).

Goals and Outcomes Achieved

The objective of this project was GAP/GHP certification of 20 farms per year. (40 farms total). This included recertification, new certification, or increased certification levels for farms. In 2010, 30 farms received GAP/GHP certification. In 2011, 35 farms received GAP/GHP certification. In 2012, we expected that 45 farms would receive their GAP/GHP certification. We met with, and worked with, over 75 farms over the term of this grant.

An evaluation survey was sent to 65 producers in July/August of 2012 to ascertain their beliefs on the effectiveness of the program. Stamped, self-addressed envelopes were included for return of completed surveys. There were six growers who called and said they didn't like to do those surveys, but that they appreciated our work greatly and would not change a thing. Results of the 21 returned surveys are summarized below:

Survey

#1 how did you learn about this assistance this grant offered? A. trade show B. newsletter C. Event D. word of mouth E. email F. web page.
G. other
#2 were you made aware of Good Agricultural Practices you might implement? Y/N
#3 did you go on to get GAP certification? Y/N
#4 Did AgMatters LLC make the process do able for you? Y/N/Somewhat
#5 were the materials provided useful? Y/N/Somewhat
#6 were your questions answered in a timely manner? Y/N
#7 Did AgMatters LLC provide the technical assistance you needed? Y/N
#8 what are your suggestions for improvement of delivery? Other Comments…

Results

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	E	A	E	D	C	D	D	D	D	B	D	B	A,D,G	C	B, E	C	A	A. B	D	A, D	A,C,D	A, E	B	C
2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	?	Y	Y	Y
3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	N	Y	Y
4	Y	Y	Y	Y	Y	Y	Y	Y	S	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
5	Y	Y	Y	Y	Y	Y	Y	Y	S	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
6	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
7	Y	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Suggestions/Comments
1. Keep up good work. We need all the help we can get the navigate the morass of regulations
3. Would like a Mac version of the plan. (FYI the plan was compatible with MAC, but the grower did not have the computer skills to use it)
4. It was timely and comprehensive. I have no criticism.
6. Linda is the guru! Thank you. How do you improve on perfection?
8. Yes! Thanks so much for coming down and walking us through it. Still waiting on our certificate or some form of documentation from State.

10. Can't thank you folks enough. Excellent service.
11. The program is being well done as it is. We really appreciate the program.
13. Vital. No suggestions from my vantage point
15. None.
17. Works okay.
18. Thank you Linda for helping us get through our audit. We couldn't have done it without you.
19. Personal visits to individual sites and facilities with specific recommendations.
20. Lauchlin and Linda were great help—accommodating our schedule needs in particular. They did a great job organizing the information germane to the apple industry. Convinced us it was doable. Answered a myriad of questions that may or may not have been necessary, but that had been bothering us. Thanks for the help.
21. Would not have been successful if not for help from Linda. Thanks! Certification should be valid for three years on some crops. It is too short a time frame for spring crops and too expensive for small farms on limited scale
22. We didn't get certification, but we learned a lot from the Titus's. I would like to receive emails on what is happening with diseases and insects during the summer. Thank you for all you do for agriculture.
23. More pre-done forms

Summary of results and comments

We feel the results are consistently positive. We received about one third of the surveys back and have had similar positive feedback verbally throughout the period of the grant, as well as notes and emails of similar tone. When people had criticism, it was not about delivery of the grant, but rather the GAP audit itself, which we cannot change.

Unexpected Outcome

When we wrote this grant, we had no idea how popular this type of assistance would become. We have fielded inquiries from all over New England about our work and the materials we created. We have shared all our materials. We were featured as guest speakers at the Food Safety Workshop for Farms; and the Food Safety Workshop for Service Providers in Cheshire County Conservation District in NH. (They wrote a Specialty Crop Grant to cover this). Our materials have been used by growers in NH and Vermont as well as in Maine. Hannaford distributed cds of our work to all their growers in New England.

When we began this work, we did not intend to write a template for a food safety plan. However growers have been overwhelming in their need to have food safety—as it applies to their operations, formatted in such a way that the process is clear, concise, and immediately usable. They want to do what is right, but they cannot stop their operations to figure this out alone. Many growers attended out-of-State meetings when this came about and came home with huge binders of materials that they never had the time to open and work with again. They came back with the template of what they would have to do, but the task of putting it all together seemed

overwhelming. Learning is an active state. Materials need to be applied to personal situations to make them understandable. The key was in making sure that when our visit was over, each farm had a roughed out plan that they could put into place immediately and a list of what they needed to do next. Record keeping also needed to be streamlined into a process that became a routine. For large operations, it is a daily task, for smaller ones, it can be accomplished once a week.

Although we created a template for a plan, each plan ends up being specific to the operation of the specific farm. The template included every possibility for every operation, so when we met, we added or deleted as we went over each section. The goal was real food safety. Not all growers go on to apply for GAP/GHP certification, some just wanted to know what this is all about and what kind of changes they would have to make to their operations in order to be certified. We can say, without a doubt that **every farm visit we made resulted in the grower learning something about food safety.** We can also say that every grower we worked with has passed the audit on their first try.

Our experiences have made it clear to us that growers needed this to happen. For many farms, the way things have been done forever was the only way they could be done unless someone, like us, helped out. Some of the biggest changes we saw were:

- The availability of restrooms and hand wash stations for all workers on farms. (The woods are no longer an option).
- Worker Protection training happening--many farms did not realize it was their job to do this.
- Manure is very carefully managed and more and more growers who are continuing to use it are spreading in the fall for the next season. Many have just switched to fertilizer.
- People are paying attention to their water sources and purity. Until this process came along, people just assumed their wells were fine.
- Training employees has gotten to be another of the benefits of this program. Up until now, growers just assumed the workers knew these things already. Putting everyone on the same page and utilizing the same standard operating procedures means consistency across the board.
- Grower pride in their operations and their products has definitely risen. Work areas are clean and neat, some shine!
- Traceability has forced record keeping that is ending up being helpful in business planning and evaluation of growing crops.
- When this first was spoken of, it was met with unanimous derision and dire threats. That is no longer the case. Change has occurred.

Progress toward achieving outcomes:
We have met and exceeded all goals for this grant. See charts on next few pages for numbers.

Beneficiaries

The beneficiaries of this grant are Maine consumers of local produce and Maine Specialty Crop Growers. This project is improving and enhancing competitiveness for specialty crops in Maine. GAP certification is all about meeting food safety standards that apply no matter what the size of the operation. It allows all farms to compete on the same playing field, as they attain levels of certification that are well respected throughout the states. These levels focus on the farm itself and sources of water and fertilization; safety and hygiene; field harvesting; food packing and where it is done; on storage and transportation; and on the ability of a producer to do trace back. This certification is something worth bragging about. It stands for extra efforts made by individual farmers to insure that their products are of the highest quality. GAP has become a buzz word in the field.

The increased numbers of farmers who attained certification will benefit Maine consumers by offering them the best product possible. Although GAP is not a guarantee of food safety, it is proof that the farm is doing all it can to produce the highest quality produce. It also allows markets to state that they sell quality local produce and increase the sales of that produce.

Lessons learned

It is very clear to us that our success is due in large part to our ability to assist growers in large and small groups and to take the time to work with individual situations on farms. Change is a process and as such needs to be nurtured. Four years ago, when we first started doing this work, there was strong resistance and resentment. Today, when we go to farms, we hear how much they appreciate our support and how it isn't as bad as they thought it would be. We also are told over and over that if it were not for our assistance, they would never be able to do it. That is quite rewarding.

Contact information

AgMatters LLC
Lauchlin, Linda, and Jeremiah Titus
1063 Main St.
Vassalboro, ME 04989
207-873-2108
www.agmattersllc.com

Additional Information

Listing of Audited Farms

1, 2, or 3 denotes successful audit sections **X = met with and trained them** *** expected to have successful audit by 11/ 2012**

Grower/Business Name	Address	2010 Audit Sections	2011 Audit Sections	2012 Audit Sections
Anderson Farms/Pumpkinworld	77 Buda Rd, Dayton	1,2	1,2	1,2
Bouchard's Farm--Jan	3 Strip Rd, Fort Kent			X
Arbour, Larry	33 Thomaston St, Thomaston			X
Arro Ergonic	683-2205	X	X	
Beach, Jed	12 Van cycle Rd, Lincolnville	X	X	
Beardsworth, Jeff/Homewood Farm	118 Ackley Farm Rd, Blue Hill	1,2	1,2	1,2
Beauvilet, Dale (P&S Farms)	Rte. 2,.Oakfield			*
Belanger & Sons	262 Cotton Rd, Lewiston	1,2	1,2	1,2
Bell Farms Inc.	1153 Riverside Drive, Auburn	1,2	1,2,3	1,2,3+ Global
Belle Vue Farm (Brian Baggott)	PO Box 310, Manchester, ME 04351		X	1,2
Benson, Joyce	Myrick Rd, Thorndike	X		
Beth's Farm Market/ Ahlholm's	1986 Western Rd, Warren	X	1,2,3	1,2,3
Brackett Orchards (Manley)	224 Sokokis Ave, Limington	X	1,2	*
Bradbury, Forest	447 Dearwander Rd, Hollis			*
Bridges Wild Blueberries	Calais	X	X	
Bridges, Greg/Candy	114 US Rte. 1 Baring Plt. Calais		X	
Caford Orchards	474-8501		X	
Cherryfield Foods			X	
Clark Farms	65 Boynton Schoolhouse Rd, Jefferson	1,2	1,2	*
County Fair Farm/Williamson, Andy	423 Augusta Rd. Jefferson	1,2	1,2	*
Crane Bros/Flood Zone Farm	14 Maxwell Farm Rd, Canton	X	1,2	*
Crestholme Farm	167 Main St, Oxford	1,2	X	1,2
Cross Rd. Farm, Arnold Pearlman	314 Cross Rd,Jonesport 04649	X	X	1,2
Dunlap Vegetables	438 Solon Rd, N. Anson		1,2	
Farm Bureau Meetings (2)	Jonesport			X
Farmer Kevin's Organic Kevin Leavitt	160 Pamela Drive, Winthrop			1,2
Faunce, Irving Wilton blueberries	83 McLauchlin Rd, Wilton 5782609			X

Five Fields Farm	720 S. Bridgton Rd, Bridgton	1,2	1,2	*
Francesca Farms	295 Coopers Mills Rd, Windsor		1,2	*
Gale Robinson	1467A Bangor Rd, Dover Foxcroft 04426			X
Gardiner Farm--Mike/Jane Ricci	634 Grindstone Rd, Stacyville			1,2
George, Charles	Ridge Rd, Fairfield		X	
Gerald Cushing	331 River Rd, Cushing		X	
Grant's Farm	77 Grant Rd, Saco	1,2	1,2	*
Green Earth Farm Jack Giguere & Dale Fegel	Albion 5086316044	X	X	
Green Thumb Farms	123 W. Fryeburg Rd, Fryeburg	1,2,3,4	Global GAP	Global GAP
Hannaford 9/29/12	145 Pleasant Hill Rd, Scarborough			trained 5 managers
Hanson, Shauna (Organic Blueberries)	Belmont/Belfast Coop 338-8980			X
Hawes, Ernest	Albion		X	
Ireland Farms	135 Sweet Rd, Lincoln	1,2	1,2	1,2
Isaac Skilling's Farm	52 Wood Rd, Gorham	1,2	1,2	*
Jillson's Farm & Sugar House	143 Jordan Bridge Rd, Sabattus		1,2	*
Jordan’s Farm	21 Wells Rd, Cape Elizabeth			X
Lakeside Family Farms/Stew Smith	428 Mullen Rd., Newport	1,2	1,2	1,2
Laurie and Leon Perry	351 Westside Rd, Addison	X		
Lemieux's Orchards LLC	210 Priest Hill Rd., Vassalboro	1,2	1,2	*
Linda's Wild Blueberries LLC	PO Box 26, Eddington	1,2	1,2	1,2
MacAvoy, Gerald	Aroostook Rd., Benedicta			*
Maine Sweet & Wild (Sue Jordan)	24 Minnow Brook, Waltham	1,2	1,2,3	1,2
Mayberry, Carol	Sebago	X		
McDougal Orchards LLC (Ellen McAdam)	201 Hanson Ridge Rd, Springvale	1,2	1,2	crop failure (hail)
Moody Farm Cranberries (Margo/Fred)	154 Heal Rd., Lincolnville		1,2	X
Moorebrook Farms (Stewy Harmon)	352 Blackpoint Rd, Scarborough	1,2	1,2	*
New England Diversified Ind.	927 Mason Bay Rd, Jonesport	X	1,2,3	1,2,3
North Star Orchards (Dimocks)	97 Orchard Rd, Madison	1,2	1,2	*
Olivia's Garden/Mainely Hydroponics	163 Valley Farm Rd., New Gloucester	1,2	1,2	1,2
Orcutt Farm Wild Blueberries (Velma)	1163 Unionville Rd, Steuben		1,2	1,2
Osborne Family Farm	Charleston			1,2

Pelletier Farms	Ft. Kent			*
Perry, Lee	351 Westside Rd. Addison 4606532		X	
Pineland Farms Inc.	752 Mayal Rd., New Gloucester	1,2	1,2	1,2
Queen Bee Farm/New Elm Farm	27 Lambert Rd. Freeport		X	1,2
Randall Orchards	1 Randall Rd, Standish	1,2	1,2	*
Rocky Hill Nursery Mary Corey Elack	55 Cemetery Rd, Wilton 6455381		X	
Rowes Apples (Ed Buzanowski)	39 Palmer Rd, Newport		X	
Roy, John	1218 N. Perley Rd, Ft. Kent			*
Sandy River Farms	560 Farmington Falls Rd, Farmington	1,2	X	1,2
Seaman's Farm Inc	1844 Hallowell Rd., Litchfield	1,2	1,2	*
Spear Farms Inc	14 Eugley Hill Rd., Nobleboro	1,2	1,2,3	1,2,3
Spillers Farm, Bill and Ann	85 Spiller Lane, Wells			X
Sugarloaf View Farm	162 Shusta Rd, Madison	X	1,2	*
Tate, Albert	136 Puddledock Rd,	X		
The Apple Farm	104 Black Point Rd, Fairfield	1,2	1,2	*
Thomas Farms	364 Garland Rd., East Corinth	1,2	1,2	*
True Farms	305 Ridge Rd, Charleston	1,2		sold business to Osborne's
Underwood, Chuck	Benton Rd, Benton	X	X	
Wes Chaney	765 Lincolnville Rd, Lincolnville		X	
Totals	**29 Audits**		**35 audits**	**45 audits**

Project Title: Providing food safety training and verification to organic and specialty crop farmers

Project Summary

As Congress neared the end of its session in 2009, there was still little certainty around how the Federal government would approach food safety at the farm level. There were at least three pathways/possibilities now moving forward. USDA was encouraging use of its Good Agricultural Practices (GAP) certification system. Some of the country's largest produce distributors and growers petitioned USDA to implement a nationwide Leafy Greens Marketing Agreement. USDA held hearings in the winter to consider whether and how to implement this proposal. Finally, the Food and Drug Administration (FDA) was the leader on policy discussions around food safety, and was increasingly asserting their authority over the entire range of the food system outside of meat production and processing. In 2009, FDA released draft food safety guidances (precursors to rules) for Leafy Greens, Tomatoes, and Melons.

If some variation of current food safety legislation passes, FDA planned to issue produce safety rules in 2011. The legislation put some bounds around the rules, but FDA's current package includes: registration, a food safety plan, a food traceability plan, and a food defense plan. The food safety plan, and food traceability plan, are both based on HACCP principles, which separate them some from USDA's approach with the GAP system. Our work, since we initiated it in 2008, has been based on two basic concepts:

USDA-GAP doesn't provide much flexibility for diversified farms, and often doesn't address critical questions (e.g., pesticide use) that MOFGA considers to be important, and, more importantly, USDA-GAP doesn't cover the full range of issues likely to be required under any FDA produce safety standard (whether in rule or statute.).

We have developed a farm food safety approach, based in HACCP principles, that results in an approach that is workable for family farms, where most of the labor is provided by the family itself, yet still gets farmers to focus on some of the critical issues that FDA has identified as at the root of produce safety issues.

Attendees at workshops we provided with the help of the SCBG program became familiar with USDA-GAP concepts, FDA's HACCP approach, and were given guidance on how to prepare a farm food safety plan that is compatible with these approaches and works within their existing organic farm plan.

Project Approach

MOFGA's work under this specialty crops grant included:

*Six workshops for farmers who are primarily direct marketers to expose them to key food safety concepts and help them move towards food safety plans. We also provided three workshops for people considering a value-added processing business; The Locations of the workshops were in: Lincolnville, Augusta, Freeport, Unity, Ellsworth, and Presque Isle. Value-added: Freeport, Unity, and Unity.

*intensive work with a smaller group of farmers who were creating food safety plans to meet the needs of their markets. A model food safety plan was created based on visits by a former FDA policymaker and trainer. That model plan was tested with farmers, both in the workshops and in one-to-one visits at farms. It has since been revised into another model plan, which is used as the basis for the most recent round of workshops. Individual farmers then took the plan and adapted it for use on their own farms.

At the workshops, we spent 3 hours, with the first half hour overviewing current policy discussions/regulatory directions and how USDA and FDA regulations were integrated. We also discussed forthcoming rules (particularly produce guidances from FDA) and discussed relevant Maine laws and regulations and how to address them.

In the second hour we took people through the model plan. Our model food safety plan used HACCP principles (identifying areas where systemic failures can create a high risk of food safety problems), but we are not billing them as HACCP plans, which implied certain record-keeping requirements. We walked people through the model farm (based on a composite of several MOFA farms) and discussed how they could apply the issues identified there to their own farm.

In the final hour and a half we took questions. We also identified resources, public and private, to resolve issues identified for particular farms. We worked the farmers through worksheets to identify critical issues for their farms. This led to farmers starting to outline their plans.

A nominal registration fee was charged ($25) for the food processing workshops. Four of the farm food safety workshops were offered at no cost, two were offered at $25. All funds went to support the program offerings. MOFGA spent approximately $25,000 on food safety work/workshops last year ($18,000, Cheryl Wixson for this specific work; $4,000 Russell Libby, ibid; $2,000 other staff and contract work—plan development; $1000 travel to workshops.)

A draft plan, integrating crops, livestock, and value-added processing, was created during the year and is being shared with individual farmers.

Goals and Outcomes Achieved

We had approximately 193 attendees at farm food safety workshops, plus an additional 90 at value-added processing workshops. During this grant period we offered food safety workshops and discussions at the following locations (with estimated attendance included):

- Farmer to Farmer Conference, Lincolnville, 2009: 45
- Agricultural Trades Show, Augusta: 60
- Freeport: 35
- Unity: 15
- Presque Isle: 18
- Ellsworth: 20

The value-added processing workshops were held in:

- Freeport: 40
- Unity (twice): 25, 25 (full each time we offer)

Intensive workshops:

- Bangor: 6 farms
- Waterville (2 times): 4, & 3

At the Bangor and Waterville workshops, ***13 farms have moved to detailed farm food safety plans that meet our understanding of FDA's current direction/intent. Fifteen (15) farms have completed food safety plans. Six were verified through visits from outside agencies.***

Other farms have informed us that they have prepared plans, but do not intend to share them or have them verified. They are using them as both internal controls and as a reference point if there is ever a food safety issue that potentially is linked to their farms. Those farms supplying Hannaford's, a major retail chain, have generally opted for USDA-GAP certification, supported by another specialty crop grant in Maine, particularly because Hannaford's has been underwriting the cost. MOFGA Certification Services, LLC, a USDA-accredited organic certifier, is working to add this verification to its offerings for the 2011 growing season. The

usefulness of that will depend on whether the market switches to a HACCP-style plan, as envisioned in HR2741 (S510) just passed by Congress in December, or stays with USDA-GAP. We think that eventually most produce farmers selling to larger markets will have to do a HACCP-style food plan, and that is why we continue to provide training that we think meets the standards of the just-passed legislation.

Beneficiaries

Farmers and processors have been actively engaged at all of the workshops and are the primary beneficiaries of our work. Some are driven by a sense of uncertainty about where the entire Federal policy discussion is headed. Others have decided that they just need to step forward to put together a plan so that they can build or maintain access to particular markets, or that they want to be ready when markets demand certification.

Lessons Learned

MOFGA's Certification Services approved a verification plan/strategy in 2010, and will begin offering food safety verifications as an add-on feature for certified organic farmers and a stand-alone product for non-certified farmers, organic or otherwise. We expect the client base to be small, initially, although Maine General is looking at it as an option for farmers who supply their food service locations.

MOFGA submitted a new food safety proposal to extend this work to the Specialty Crops Program, which was funded for one year beginning in October, 2010. We expect some farms to go through a verification process during 2011.

The major lesson learned here is that farmers are more than willing to learn new food safety skills, if given the opportunity to receive education, training, and technical assistance.

Contact Person

Cheryl Wixson

(207) 568-4142
cheryl@mofga.org

Project Title: What's in Season? Where Can I Find it?

Project Summary

The concept of buying food directly from the producer, in its raw form, is a foreign one to most of us. We live in a convenience-focused world and for many the skills and knowledge that was 'common' to generations past must be learned anew. In addition to basic food preparation information, to embrace seasonal eating we must also re-learn the harvest calendar and plan our activity in the kitchen around it. A further challenge to the growth of the Specialty Crop industry in Maine is the relative invisibility of our local food producers. In order to continue the market growth for Maine Specialty Crops this project addressed informational gaps on both the availability and utilization of local, seasonal and organic Specialty Crops. The project created marketing brochures listing specialty crops and their uses, and updated directories, both printed and online, to help drive consumers to specialty crop farmers.

A strong indicator of success is the continued growth of markets for Maine foods. The number of farms selling through the Community Supported Agriculture model grew from 145 to 180 during the course of the project. The number of farmers' markets grew from 85 to 120, including a near doubling of winter markets. We continue to see new models of direct marketing emerge and develop to grow the market for Maine specialty crops while meeting the needs of a growing customer base, including online buying clubs, home deliveries, and other convenience oriented models for buying local foods direct from farmers.

Project Approach

Availability of "how to use these specialty food crop foods" information is a limiting factor for consumers unfamiliar with the broad range of Specialty Crops widely available in Maine. The Maine Organic Farmers and Gardeners Association (MOFGA) encouraged more consumption of local, seasonal, and organic Specialty Crops through a series of educational brochures and directories. These were distributed electronically, in print, and posted on our website. Each of 5 brochures includes a simple listing of specialty crops in season over the coming two months, recipes that use those foods, storage, handling, processing, nutritional information, and links to sources. A food service focused resource provides chefs with seasonal recipes that are scaled for the institutional kitchen setting.

All of the materials developed were for Specialty Crops only. The seasonal brochures were complemented by expanded work on resources for sourcing those foods, including updated

annual directories of Community Supported Agriculture (CSA) farms and certified organic farms. We have also helped local groups to create regionally focused directories of direct-market farms. All directories are posted on the MOFGA website with open access by other groups and individuals.

We also conducted a brief consumer survey twice during the project to measure public interest in local, seasonal, and organic Specialty Crops.

During this project we:

- Twice updated the annual Maine CSA Directory (2010 and 2011 editions) with an expanded list of participating farms; (1000 print copies; on-line: over 6,000 visitors);

- Twice produced an annual directory of Maine's organic farmers which also contained a Maine Farmers' Market directory and several educational tools published in the seasonal brochures, like the "Maine Local 20" list and the "Maine Foods Pyramid". (20,000 copies printed and distributed).

- (Both are posted at: http://www.mofga.org/Publications/Directories/tabid/258/Default.aspx)

- Produced a series of five seasonal recipe brochures. These brochures include at least two recipes that emphasize foods of the season, some basic consumer information on how to store or prepare foods, and many emphasize the Maine Local Twenty. These are twenty foods (and food groups) that are generally available within Maine throughout the entire cycle of the year. (5,000 copies of each brochure printed and distributed though farmers, retailers, and educators).

  (Brochures are posted at: http://www.mofga.net/Directories/FarmersMarkets/tabid/352/Default.aspx)

- Created and distributed food-service specific Maine Seasonal Recipes and seasonal food availability information, sending this information directly to school food service directors through a School Food Service listserv and through the Maine Farm to School Work Group, a support network around Farm to School in Maine. Cheryl Wixson conducted training on the resource at the Real Food Institute of Midcoast Maine's "Back to Scratch" Conference in 2011.
  (Food service recipes are posted at: http://www.mofga.org/Default.aspx?tabid=818)

We broadly distributed the resources created as a result of this project. All resources (seasonal brochures, directories and links to further resources) are available online and in print, to any farmer or consumer who expresses interest. We have sent notices about availability to:

- Farmers' Market Managers (100+)
- CSA Farms (180)

- Other businesses with an emphasis on 'eat local': Natural Food Stores, Food Co-ops, etc. (100+)
- Public Libraries (300)
- Other Farmers & Gardeners (2000+)
- MOFGA's Membership (5000+)
- Common Ground Country Fairgoers (50,000+)
- Other groups with 'eat local' interests: Maine Department of Agriculture, Eat Local Foods Coalition, Healthy Maine Partners, etc. (5+)
- Media Outlets (50+)
- School Nutrition Directors (100)

MOFGA provided additional funds to each of these efforts, specifically the Farmer and CSA directory, in order to ensure that the Specialty Crop Funds funded only those portions of the directories involving promotion of Specialty crops.

Goals and Outcomes Achieved

Goal 1: Ten seasonal brochures prepared over a two-year cycle, with distribution to at least 5000 people through electronic means and to 1000 in print form. Through follow up interviews, at least 50 farmers will report distributing them to customers. In year two we will also prepare a series of brochures prepared for the food service sector, with recipes scaled for institutional settings. Through outreach to food service directors in Maine's public school districts, at least 10 districts will report using information contained in these brochures.

Outcome: We printed 5 seasonal brochures, 5,000 copies of each, and distributed through multiple channels: events, mailings, farmers' markets, and fulfilling requests. They have proven an important educational tool to many organizations across the state involved in nutrition education and promotion of local agriculture. By the spring of 2011 we had to reorder the brochures and we continue to maintain an inventory to fill the regular request we receive for copies. The brochures are also available electronically on our website and by request, and are used regularly in MOFGA's electronic outreach and communications.

In year two we created a food service-focused resource focused on seasonal menus appropriate for the institutional kitchen, and complemented this resource with the 5 brochure series created in year one (Note: we decided that a single comprehensive resource would be more effective at reaching the food service audience rather than a series of publications as originally proposed). The seasonal food-service recipes are available for free on MOFGA's website and have been tested, taught and presented at multiple workshops and conferences for school and other food service chefs, and promoted through the nutrition and school nutrition networks in the state including the Maine Farm to School Work Group and Network, the Maine Nutrition Network, University of Maine Cooperative Extension, Healthy Maine Partnership sites, Maine FoodCorps, and others.

Goal 2: CSA directories updated and distributed annually, with 1000 copies each made available for CSA fairs and similar promotional events. Regular updates via the Internet. Number of CSA farms continues to increase, from current 145 to 175 over the two-year period.

Outcome: The CSA directories were updated printed and distributed as expected, we carried out promotional activities for CSAs, and the number of CSA farms grew as expected to approximately 180 by the end of the project.

Goal 3: Annual directories of certified organic farmers prepared, and distributed, with the directory distributed both in separate form and through *The Maine Organic Farmer and Gardener* in newspaper form. Number of certified organic producers increases by 10% over the two years, to at least 440.

Outcome: Directories were prepared and distributed: through the Maine Organic Farmer and Gardener distribution; to natural food stores and other 'local food friendly' outlets across the state; and through the Maine Tourism Association kiosks.

We did not achieve the goal of 440 certified organic farms. We believe the MOFGA and/ or USDA Certified Organic brand lacks adequate differentiation in the local foods marketplace, resulting in weak growth in certified organic farm numbers. This is an identified need for future work.

Goal 4: Two surveys will help to monitor consumer purchases of, and commitment to, local, seasonal, and organic Specialty Crops.

Outcome: Our baseline survey (conducted by Pan-Atlantic SMS Group, May, 2010) shows that a high percentage of Maine families already are committed to supporting Maine farmers, and make regular purchases at farmers' markets, CSA's, and farmstands. Because we used the same questions as in a prior (2004) MOFGA survey, we are also able to observe major increases in support over the past five years.

The final survey (conducted by Pan-Atlantic SMS Group, Nov, 2011) shows an increase in the percentage of people who spend $20 or more per week buying directly from farmers, but a decrease in the percentage who say they buy food directly from a farmer "very often". This somewhat contradictory data may be explained by the economic downturn experienced during this period where demonstrating any market growth would have been difficult.

A strong indicator of success is the continued growth of markets for Maine foods. The number of farms selling through the Community Supported Agriculture model grew from 145 to 180 during the course of the project. The number of farmers' markets grew from 85 to 120, including a near doubling of winter markets. We continue to see new models of direct marketing emerge and develop to grow the market for Maine specialty crops while meeting the needs of a growing customer base, including online buying clubs, home deliveries, and other convenience oriented models for buying local foods direct from farmers.

Beneficiaries

Overall, Maine families have benefited from increased knowledge on the availability and usefulness of local, seasonal and organic Specialty Crops. Maine farmers, especially those marketing directly to the consumer, have benefited from increased awareness of and demand for their products.

Through this project we have, and continue to increase, the knowledge of Maine families about the availability, methods of enjoying, and many benefits of consuming Specialty Crops grown in Maine.

Lessons Learned

There is a large demand for educational tools about the availability of seasonal foods and how to prepare, process, and store them. We should consider how to create additional resources in the future, and promote the availability of existing ones to a broader public audience.

We did not achieve the goal of 440 certified organic farms. We believe the MOFGA and/ or USDA Certified Organic brand lacks adequate differentiation in the local foods marketplace, resulting in weak demand for 'certified organic' specifically in local markets, and thus weak growth in certified organic farm numbers. This is an identified need for future work.

Contact Person

Melissa White Pillsbury
(207) 568-4142
melissa@mofga.org

Project Title: New Potato Varieties to Provide Marketing Opportunities and Improved Pest Resistance

Project Summary

The intent of this proposal was to steadily improve the Maine Potato Breeding Program to assure that it provides a high level of service to the industry over time

The Maine Potato Breeding Program uses traditional plant breeding techniques to create, select, and develop new potato varieties. Parents for our crosses come from diverse sources including our own breeding clones, other North American and European breeding programs, the International Potato Center, the USDA-ARS Potato Germplasm Collection in Sturgeon Bay (WI) and USDA potato germplasm improvement programs. Initial selection is conducted primarily in northern Maine; however, we cooperate with several other programs in the United States and elsewhere to select and evaluate our plant materials these programs include: NC, WI, ND, and USDA-ARS Idaho. Research collaborations with Dr. Benildo de los Reyes are adding a molecular component which we hope will help speed the selection process for new traits (e.g. pink rot resistance).

Crosses conducted in the University of Maine's Aroostook Research Farm greenhouse during winter/spring typically result in about 200 families and 250,000 true potato seed (TPS) annually. Seedlings from the prior-year TPS production are planted in the greenhouse during the spring and result in the production of up 30,000 seedlings "A" tubers. The greenhouse seedling crop also produces up to 30,000 "B" and "C" tubers. The majority of the "B" and "C" tubers are sent to cooperating breeding programs (e.g. the USDA-ARS Aberdeen, ID and the University of Wisconsin). This exchange of seedling tubers allows our breeding materials to be evaluated and selected under diverse environmental conditions. It turn, our program receives seedling tubers from both of these programs. This coordinated potato germplasm exchange is one of several activities that we participate in to help improve the efficiency of potato germplasm utilization within the North American potato breeding programs.

The Maine Potato Breeding Program is now planting 45-50,000 single-hills at the Aroostook Research Farm each season. These single-hill plots were derived from greenhouse tubers grown during the previous year (by our program, the USDA-ARS Aberdeen, and U. of Wisconsin) and represent the first year of field selection to produce new potato varieties. At harvest, clones from the single hills (typically 1-2%) are selected for further evaluation based on their yield and appearance. The clones will be evaluated in our 8- and 12-hill plots during the next season and enter replicated yield trials in their fourth field season. Over the course of six years of field selection the clones are evaluated for yield, quality, disease resistance, bruise susceptibility, processing characteristics, and other attributes. In takes six to eight field seasons of selection and evaluation of the advanced materials at multiple trials sites to identify potato clones that show enough promise to warrant commercial-scale evaluation. Because each step of the process from crossing through initial field selection to multi-site testing of advanced materials takes

place each growing season, we anticipate that our program will generate a steady stream of promising candidate potato varieties that have the potential to benefit the potato industry.

For the past 18 months, we have made a series of improvements in the breeding program that should pay off in the future with a steady stream of strong candidate varieties to be considered for commercialization. These improvements have initially focused on improvement of the program's selection procedures; however, increasingly they will be shifted to upgrading the program's variety development efforts. Some of the improvements that have occurred over the past 18 months are as follows:

Breeding and Selection

- Doubled our single-hill selections to 45,000 to 50,000 annually.
- Expanded early-selection of our materials in NC and NJ to better identify promising clones for Maine's seed markets in the SE states.
- Set up germplasm exchange and evaluation programs with USDA-ARS Idaho, ND, and WI. In addition to bringing in russets to select under our growing conditions, this effort has brought an infusion of reds, chippers, and disease-resistant germplasm from these programs.
- Expanded our multi-site evaluation program to better select promising, widely adapted clones.
- Developed a database for managing information from the multi-site variety trials. This database is essential for decision-making and summarizing results over many trials.
- Strengthened protocols for determining processing quality bruise susceptibility, and boiled/baked quality.
- Improved our screening procedure for late blight resistance by collaborating with Penn State. Late blight resistant clones are now identified 3-4 years earlier than in the past.
- Re-established cooperative program of GN screening with USDA-ARS, Ithaca.
- Incorporated pink rot resistance screening into the program with the help of Dave Lambert.
- Initiated a study to develop molecular tools to screen for pink rot resistance with the help of David Lambert and Benildo de los Reyes.
- Reestablished an effective fusarium resistance screening protocol.
- Submitted AF clones to national late blight, scab, and verticillium resistance screening trials.
- Participated in the SolCap program, which is geared toward expanding the use molecular tools in potato and pepper breeding and selection.
- Participated in seven collaborative research proposals with other institutions including USDA-ARS, University of Minnesota, North Carolina State University, Cornell University, Michigan State, and Penn State. Only one proposal, the USDA CSREES Special Grant for Potato Research was funded.

Variety Development and Commercialization

- Improved our partnership with the Maine Seed Potato Board seed propagation facility and submitted eleven advanced clones to the facility for clean-up, tissue culturing, and initial seed propagation on a paid basis.
- Worked with Aroostook Research Farm to generate certified seed of advanced clones for entry into commercial-scale trials through the New Potato Variety Challenge Grant Program.
- Re-established variety development linkages and set up advanced clone evaluations with potato processors.
- Established an industry advisory panel (ad-hoc Variety Development Advisory Committee) to guide variety development and seed increase decisions.
- Entered a promising chipper into the USPB/SFA national variety trial.
- Publicized the program's efforts through presentations and a booth at the Maine Potato Conference, TV interviews, an industry-organized article in Spudman, and other press releases.

Project Approach

The Maine Potato Board was awarded a contract in the amount of $54,000 on November 12, 2010 to provide marketing opportunities and help solve pest/disease problems through the development and selection of new potato varieties.

The University of Maine Potato Breeding Program used traditional plant breeding to create, select, and develop new potato varieties for Maine and elsewhere. The objective of this research was to develop and select new potato varieties which will provide those opportunities to the Maine Potato Industry. During 2011 our research effort by market category was as follows: 60% russets and long-whites for processing and/or fresh market; 30% whites for chipping and/or fresh market; and 10% reds and specialty varieties. The Maine breeding program is the only eastern U.S. program with an emphasis on russets and long-whites with processing and fresh market potential. Priorities in the area of disease resistance were: late blight, scab, and pink rot. Because of increasing concerns about PVY in the U.S. potato industry, we dramatically increased our crossing and selection program for PVY resistance. Although these diseases were our top priorities, our work on disease and pest resistance also included efforts to develop varieties with resistance to: PLRV, verticillium wilt, fusarium dry rot, nematodes, bruising, internal defects, insects, etc.

Progress on Russets/Long Whites: We currently have 11 advanced russet/long-white clones (AF3000-1, AF3001-6, AF3008-3, AF3317-15, AF3362-1, AF4040-2, AF4113-2, AF4124-4, AF4124-7, AF4172-2, and AF4191-2) in processing trials with McCain Foods and more than a dozen promising candidate clones immediately behind these. McCain Foods provides key collaboration in the selection phase, through processing quality evaluations at their technology center, and to champion adoption of the most promising clones. More detailed information on

three of these clones is provided later in the report. We are actively participating in U.S. Potato Board and USDA-NIFA SCRI projects designed to improve the quality of processed potato products. Nineteen russet clones from the program were tested in Idaho, Washington, and North Dakota as part of this effort during 2011.

Progress on Whites and Chippers: AF0338-17 is being tested as an alternative to Atlantic in the S.E. states. It combines high yields, good out-of-field chipping, and much less internal heat necrosis and hollow heart than Atlantic. AF4157-6 is a promising chipping clone that combines early maturity and good out-of-field chipping in the southern states with excellent storage chip color. Seed is being increased for expanded trials in 2012. AF4013-3 is a yellow-fleshed clone that did well in 2011 trials in the eastern U.S. AF2291-10 is a "northern chipper" and has high gravity, good early blight resistance, moderate scab resistance, and generally good yields. AF2574-1 finished its third year of commercial trials in northern Maine. It is a fresh-market white with very high yields, good internal quality, and late blight resistance. It has performed well in northern Maine, but does not have good tuber appearance in the south or mid-Atlantic. Additional promising clones are coming along behind these clones.

Progress on Reds and Specialty Types. Growers have expressed a strong interest in new red varieties that have smooth skin, attractive appearance when grown on our soils, and the ability to hold their color in storage. Reds are a critical component of the seed potato market and new, well-adapted reds will provide opportunities for our seed growers, especially in VA, NC, FL, and other southern states. Varieties in these classes provide an opportunity for market differentiation and new, higher-value markets for Maine potatoes. This is a new component of the breeding program which was established based on grower input. Red-skinned, greenhouse-grown seedling tubers brought in from WI, ND, and ID have been screened in ME since 2008 and entered testing in FL, NC, and NJ during 2010. Several are showing excellent potential and seed of the most promising is being multiplied so that they can be tested on a larger scale during 2012.

Progress of Disease Resistance: Advanced clones in our program typically have resistance to several important potato pests. As examples, McCain Foods had three of our clones in 2011 commercial strip trials: AF3362-1 has resistance to scab as well as excellent bruise resistance; AF3001-6 has excellent verticillium resistance, while AF3317-15 has very good resistance to late blight, scab, and pink rot. AF2574-1, a round-white in commercial trials since 2009 has good late blight resistance and very high yields. Progress in breeding for late blight resistance has been dramatic. We currently have 84 late blight resistant, third-year or more advanced clones moving through the program and more coming behind them. The clones will be moved forward based on field performance and either developed for commercial release or used as breeding material to produce future commercially valuable cultivars with good field resistance to late blight. These cultivars would reduce the vulnerability of the crop to losses from late blight and would potentially allow growers to reduce their fungicide costs.

Scab resistance is a high priority for our program and for most growers that I talk with. We are working hard to select promising scab resistant varieties in each market class, as well as increasing the scab resistance in our parental material and improving our selection procedures. PVY has become a severe problem for the industry and our breeding program has responded to this problem by increasing the number of PVY resistant parents in our seedling families and crosses as well as by working to improve our selection criteria.

Breeding and Selection Approach: Crossing takes place at Aroostook Research Farm using parents from our program, Cornell University, Michigan State, North Dakota State University, University Wisconsin, and the USDA-ARS, as well as named varieties. We generate true potato seed from the crosses and use these seeds to produce greenhouse seedling tubers. Excess greenhouse tubers are exchanged with the USDA-ARS Idaho, North Dakota, and Wisconsin breeding programs to gain access to russets, reds, and chippers that will strengthen our program's ability to provide new varieties for the Maine industry.

Crosses conducted in the Aroostook Research Farm greenhouse during spring 2011 resulted in 61 families and 25,300 true potato seed (TPS). The top priorities represented in the 2011 crosses were improved russet, processing, and chipping clones, especially with late blight, scab, and or virus resistance. Seedling tubers (45,224) from prior ME crosses and from germplasm exchanges with other breeding programs (WI, USDA-ARS, and ND) were planted in the field and selected for performance under ME growing conditions. We selected 1174 (2.6%) for continued evaluation in 2012. By category the selections were as follows: 535 (46%) round to oblong white-skinned potatoes for fresh and/or chipping markets; 159 (13%) red- or purple-skinned potatoes for fresh market or processing; and 480 (41%) long-tuber-type whites and russets for fresh and/or processing markets. The selection of 13% red- or purple-skinned potatoes is a marked change for the program and reflects grower interest in developing red-skinned varieties with excellent appearance under ME conditions.

A total of 367 second-year clones were selected during fall 2011 (367 out of 1423, 25.8%). Of these selections, 139 (38%) were russets or long whites. There were 179 round-white selections (49%) and 49 (13%) were red-skinned or specialty clones. Many of these clones were derived from parents with late blight and/or other key disease resistance traits. Chip/fry color was used as a selection criterion for the whites and russets. The 367 selected second-year clones will be advanced to 3rd year testing during 2012.

Nineteen of 33 (60%) advanced selections (6th year or older clones) were retained for further evaluation in ME and elsewhere during 2012. The advanced clones that have been selected to date are distributed as follows: 10 russets and long whites (53%), 7 round-whites (37%), and 2 yellow-fleshed (10%). Thirteen of 33 (39%) intermediate selections (5th year clones) were retained for further evaluation during 2012. These were distributed as follows: 10 russets and long whites (77%), 3 round-whites (23%), and 0 colored skin or specialty clones (0%). Forty-four of 84 (52%) 4th year clones were retained for further evaluation during 2012. These were

distributed as follows: 14 russets and long whites (32%), 20 round-whites (45%), and 10 colored skin or specialty clone (23%). Sixty-nine of 215 (32%) 3rd year clones were retained for further evaluation during 2012. These were distributed as follows: 26 russets and long whites (38%), 28 round-whites (41%), and 15 colored skin or specialty clones (22%).

Minitubers, N1, or N2 seed of the following advanced clones are available from the Maine Seed Potato Board or will become available after the 2012 harvest: AF2291-10, AF2574-1, AF0338-17, AF3001-6, AF3317-15, and AF3362-1.

Current Top Advanced Prospects for Commercialization Seed of these clones is currently available from the Maine Seed Potato Board, Maine seed growers, and/or Aroostook Research Farm. Additional clones in each marketing class will become available over the coming years.

AF0338-17 (AF303-5 x SA8211-6), a widely-adapted, mid-season, high yielding, round white for out-of-field chipping and fresh market. It has performed well in the S.E. and Mid-Atlantic States with U.S. #1 yields averaging 96% of Atlantic. Specific gravity has averaged 4 points lower than Atlantic. AF0338-17 has chipped well from the field and has had much lower incidence of internal defects than Atlantic. It is moderately susceptible to scab, but has moderate verticillium resistance. Seed Availability: Maine certified seed (see ME seed book), Maine Seed Potato Board N1 and N3 seed and disease-free plantlets or minitubers; ~40 cwt. of University of Maine seed.

AF2291-10 (SA8211-6 x EB8109-1), a chipping prospect for northern areas. AF2291-10 has high specific gravity, moderate scab resistance, and medium-late to late vine maturity. It has chipped from June storage in Ontario trials. It can be prone off shapes and has blackspot bruise susceptibility similar to Snowden. It is not well adapted to production in the S.E. states. Seed Availability: Maine certified seed (see ME seed book), Maine Seed Potato Board N2 seed tubers and disease-free plantlets or minitubers; ~65 cwt. of University of Maine seed.

AF2574-1 (AF2153-2 OP), a fresh-market white with moderate late blight resistance. AF2574-1 is late maturing and has good internal quality and high yields. U.S. #1 yields have averaged ~120% of standard round-white varieties (Atlantic and Katahdin) in Maine trials. Tuber sizing is good, but external appearance has been inconsistent. It is not well adapted to production in the S.E. and Mid-Atlantic States. AF2574-1 is moderately susceptible to scab. It has been commercially tested in Northern Maine for three years with good results. Seed Availability: Maine Seed Potato Board N2 seed and disease-free plantlets or minitubers; ~24 cwt. of University of Maine seed.

AF3001-6 (Silverton Russet x AF1668-60), a widely adapted, late maturing, long-white with netted skin, very good fry color, and high yields. AF3001-6 is very good baked, boiled, and mashed. U.S. #1 yields have averaged ~127% of standard russeted varieties (usually Russet Burbank) in Maine trials. Specific gravity is moderate (average of 1.086

in ME trials) and fry color from storage has been excellent. It is moderately susceptible to scab, but has good verticillium resistance. Seed Availability: Maine Seed Potato Board N1 and N2 seed and disease-free plantlets or minitubers; ~20 cwt. of University of Maine seed.

AF3317-15 (AWN86514-2 x Reeves Kingpin), a long russet with late blight resistance and potential for fresh market and processing. AF3317-15 is very good baked and mashed. AF3317-15 has very late vine maturity and long tubers with russeted skin. It can yield well when given a long growing season, but needs a lot of time to develop and mature tubers. Specific gravity is moderate (average of 1.085 in ME trials) and fry color from storage has been fair to good. It has resistance to late blight, common scab, and pink rot. Seed Availability: Maine Seed Potato Board disease-free plantlets, minitubers, or N1 seed; ~14 cwt. of University of Maine seed.

AF3362-1 (Reeves Kingpin x Silverton Russet), a mid-season, long russet with good yields, processing potential, and fair to good appearance. AF3362-1 is very good baked and mashed. U.S. #1 yields have averaged ~110% of standard russeted varieties (usually Russet Burbank) in Maine trials. Specific gravity is moderate (average of 1.084 in ME trials) and fry color from storage has been mostly good. It has moderate scab resistance. AF3362-1 is susceptible to internal heat necrosis and should not be grown in the S.E. states or other areas where this defect is frequently observed. Seed Availability: Certified Maine Seed (see ME seed book), Maine Seed Potato Board disease-free plantlets, minitubers, or N1 seed; ~25 cwt. of University of Maine seed.

AF4013-3 (MonDak Gold x SA9704-1), a mid-season, oblong to round, yellow with pink eyes and good yields, moderately-high gravity, good chip color, and good appearance where scab is not a problem and tuber size is controlled. U.S. #1 yields have averaged ~93% of standard varieties (usually Atlantic; one site with severe scab was dropped from this calculation) in Maine trials. Specific gravity is moderate to high (average of 1.090 in ME trials) and fry color from storage has been mostly good. It is susceptible to scab. AF4013-3 has potential for specialty fresh market, chipping, and processing on fields where scab is not a concern. Seed Availability: ~15 cwt. of University of Maine seed.

AF4157-6 (Yankee Chipper x Dakota Pearl), an early to mid-season, round to oblong white with good yields, moderately-high gravity, very good chip color, and fair to good appearance. U.S. #1 yields have averaged ~110% of standard varieties (usually Atlantic) in Maine trials. Specific gravity is moderate to high (average of 1.091 in ME trials) and fry color from storage has been mostly good. It is susceptible to scab. AF4157-6 has potential as a chipper in southern states and in northern states on fields where scab is not a concern. Seed Availability: ~15 cwt. of University of Maine seed. AF4157-6 has been entered into tissue culture for future seed production.

Goals and Outcomes Achieved

Measurable outcomes of this project are the complete evaluation of all new varieties coming out of the Maine Potato Breeding Program. Each year all varieties are evaluated to determine if they have what it will take to find a place in the potato industry. Every year new varieties are entered into the program and old ones that don't meet the needs of the industry are taken out.

Once the evaluations are complete new varieties are put into commercial trails where the final determination will be made if there is a viable commercial market for the variety. Success is determined by how many varieties are actually accepted by the commercial market.

All information gathered from the research undertaken as part of the Potato Breeding Program is published annually and made available to growers and processors in Maine. The information provided allowed them to determine if a new variety from the program has the ability to become viable in commercial production.

Beneficiaries

The beneficiaries of this research are our 350 potato growers in Maine. Successful development of a new potato variety can provide many economic benefits to the Maine potato industry including over 350 growers, potato processors and potato dealers as well as the ultimate beneficiary, the potato consumer. New varieties enhance marketing opportunities (e.g. high quality varieties for processing, fresh market, or seed use) or they can improve profits by providing improved yields for an existing market. They can also improve profits by reducing losses to disease (e.g. better scab, fusarium, or blight resistance) or by decreasing the costs required to control a disease (e.g. blight resistance reduces the number of sprays required to control the pest).

Lessons Learned

Potato breeding is a long term commitment. The University of Maine breeding program has many years of potato breeding experience, and is committed to providing potato breeding research into the future. There are some promising varieties that a currently in the program we are excited to see what the future holds for opportunities to commercialize these varieties.

Contact Information

Dr. Greg Porter

207-581-2943

porter @maine.edu

Project Title: The Power of Blue – Communicating the Nutritional Benefits of Wild Blueberries

Project Summary

The purpose of *The Power of Blue – Communicating the Nutritional Benefits of Wild Blueberries* project was to increase demand and consumption of wild blueberries by communicating the fruit's health and nutritional benefits to adults and children nationwide. Dietary guidelines from the U.S. Department of Health and Human Services and the U.S. Department of Agriculture recommend that Americans choose a variety of fruits and vegetables by eating a total of five servings each day, but news and recent studies tell us that a majority of consumers are not making healthy dietary choices to include more fruits and vegetables. The Wild Blueberry Commission SCBG 2010 project was to promote the nutritional benefits of increasing wild blueberry consumption to counter this ongoing trend.

Though Maine is one of the largest producers of blueberries in this country, competition from worldwide production has doubled over the last decade and the increase in worldwide acreage in production has grown by over 150%. U.S. imports of blueberries have also skyrocketed adding to a supply surplus and a precipitous drop in prices for growers, and processors of frozen wild blueberries in Maine. Communicating the nutrition and health story is intended to build and increase demand and consumption and enhance competitiveness of wild blueberry products.

The Power of Blue – Communicating the Nutritional Benefits of Wild Blueberries 2010 Specialty Crop Block Grant project included a Satellite Media Tour, a Food Page Feature and a National Public Service Announcement campaign during 2010. Our goal for the entire project was to reach 22 million consumers nationwide with the message about the health and nutritional benefits of wild blueberries and by doing so increase overall adult and child consumption of wild blueberries.

To date each component of the Wild Blueberry Commission project has been executed and performance data is still coming in specifically for the National Public Service Announcement (PSA), which began airing in May 2010 and may be picked up by additional stations indefinitely. The National PSA called "Breaking the Frozen Barrier," has already aired in regions outside of New England. As a result of outreach during July it aired in the New England states during the fall 2010 and the Wild Blueberry Commission will receive tracking data should additional airings occur.

The performance results to date are very favorable for the project. A total of over 33 million readers, viewers, and listeners representing 11 million more than the goal set; heard, read and saw our wild blueberry project's nutrition messages. There is potential for additional views or pick up from the wildblueberries.com website. Specific metrics for each of the components of the project are included below in this report.

Project Approach

Because the timeline established for the project was flexible to take advantage of potential opportunities that became available, all components of the project were initiated during the first six months of 2010. As mentioned above, additional performance results will be reported to the Wild Blueberry Commission if and when media promotion occurs. The timing for planning and execution of the Satellite Media Tour took place from January to March 2010. Though in **The Power of Blue – Communicating the Nutritional Benefits of Wild Blueberries** SCBG proposal the Food Page Feature was originally scheduled to be completed during the first quarter of 2010, the change of schedule had no serious disadvantages to either the components or their implementation. The nature of the Satellite Media Tour and the Food Page Feature made them onetime events whereby viewership or readership occurs over a discrete timeframe.

Swardlick Marketing Group worked on behalf of the Wild Blueberry Association on message development and attended the taping for the Satellite Media Tour in New York City in March to manage set design and on-camera message delivery. During the Satellite Media Tour New York Times health columnist Anahad O'Connor and veteran Food Network chef Dave Lieberman, co-authors of *The Ten Things You Need to Eat*, highlight the health benefits of wild blueberries and demonstrate how to incorporate the berries in tasty recipes. The recipes that were demonstrated during the Satellite Media Tour include;

- Blueberry, Wax Bean and Smoked Trout Salad
- Blueberry, Lemon and Olive Oil Cake with Smashed Blueberry Sauce
- Mixed Berry Bread Pudding

A cooking demo video from Food Network chef Dave Lieberman is now linked to the wildblueberries.com website. A CD recording/showing one of the interviews by a Rochester, New York station is included with this report.

Swardlick Marketing Group worked with West Glen Communications of New York, NY to manage the project, coordinate the partners, and complete set up. Media strategy, and station distribution lists were developed as well as a script for the interview. West Glen Communications also coordinated e-distribution, media outreach and follow up and provided tracking reports for this component of the project.

During the Satellite Media Tour interviews were conducted with stations across the country via a satellite uplink from a New York City studio location. The Satellite Media Tour interviews were aired live in some markets and taped for airing in additional markets at a later date. Wild Blueberries are featured as the star of the berry category and the author suggests using frozen berries when fresh are not in season. In *The Ten Things You Need to Eat* book, the berry category including strawberries, and raspberries, has its own chapter. The authors Lieberman and O'Connor also talk about the fiber content in blueberries, as well as antioxidants and anthocyanidin, the micronutrients that are the source of the berries' health benefits.

The Food Page Feature *Wild about Blueberries* was a very successful Wild Blueberry Association project because we tailored specific messages to promote the health and nutritional benefits of wild blueberries, educate consumers about the value of frozen fruit, and provide suggestions about healthy recipes in the lifestyle section of newspapers. Together with print media, the Food Page Feature was also made available to a tremendous audience through online coverage. We expected online coverage but Swardlick Marketing could not guarantee that data could be captured from outside websites that show an increase in hits due to the Food Page advertorial.

The *Wild about Blueberries* Food Page Feature emphasized the color connection in making dietary decisions and provided basic nutrition education to consumers by telling them about antioxidant activity in the fruit, and singling out the potential for various health benefits. The feature also told people where to find Maine wild blueberries – in their supermarket freezer case – year round, and touted the health benefits and convenience of including frozen fruits in the diet. The feature also provided consumers with eye catching, mouthwatering recipes that they could use immediately. A CD with the Food Page advertorial from a number of newspapers is included in this report.

The Wild Blueberry Association partnered with the Produce for Better Health Foundation (PBH) on the development of the National radio public service announcement component of *The Power of Blue – Communicating the Nutritional Benefits of Wild Blueberries* project. Produce for Better Health Foundation's ***Fruits & Veggies—More Matters*** health initiative promotes consumption of all forms of fruits and vegetables …fresh, canned, dried, 100% juice and frozen. Since 99.5% of Maine's wild blueberry crop is processed as frozen from the field, the Wild Blueberry Association sought out PBH cooperation in working collaboratively on this project to help raise awareness for the benefits of frozen fruit. The Association is a PBH member and communicating the nutritional benefit and availability of frozen fruit to fulfill dietary needs educates consumers about healthy ways to get their daily servings of fruit.

The "Breaking the Frozen Barrier" package of spots (:60, :30, and :15) were recorded and distributed to 1,000 radio stations nationwide with the expectation that 10% to 15% of the stations could pick up the Public Service Announcements. The creative concept of "breaking the frozen barrier" is using Wild Blueberries as the example of an easy to use, affordable and - just as nutritious as fresh - choice for consumers looking for more nutrition in their diet. These spots began airing in May 2010 and the Public Service Announcement was in the market across the nation through July 2010.

Wild Blueberry Commission and Wild Blueberry Association partner Swardlick Marketing Group did an excellent job of developing the concepts to educate consumers about the health benefits of wild blueberries through the Specialty Crop Block Grant project. The "Breaking the Frozen Barrier" public service announcement and the "Wild about Blueberries" Food Page feature that made the color connection for consumers and provided information about health benefits were well received and successful nutrition education promotions.

The Wild Blueberry Association's contact with Produce for Better Health provided an added boost to the national public service announcement project and met our objective of spreading the exciting news about availability of frozen fruit and the health benefits of consuming frozen as well as fresh produce.

Swardlick Marketing Group Marketing Director, Sue Till provided the Wild Blueberry Association marketing committee with tracking and reporting information on a regular monthly basis. Association members were able to link to the Satellite Media Tour and hear the national Public Service announcements by going online to their wildblueberries.com website. Sue Till also provided additional materials in the form of recordings, spreadsheets, print media "tear sheets" and CD's to assist with tracking the project through 2010.

Goals and Outcomes Achieved

To date the Wild Blueberry Commission Specialty Crop Block Grant **the Power of Blue – Communicating the Nutritional Benefits of Wild Blueberries** has been executed and performance data goals have been exceeded by millions of readers/viewers/listeners. We broke out the data by each component of the project in the proposal. However, the total impressions were projected to be 22 million readers/viewers/listeners for the entire project. When we combined the project results our outcome exceeded our goal by 50% with over 33 million readers/listeners and viewers of these nutrition messages.

In addition, based on data from January-June 2009, the www.wildblueberries.com website averages roughly 13,000 unique visitors to the site every month. During this year's Satellite Media Tour, we saw a 16% increase in unique visitors during mid-May to mid-June versus the month prior. For the Satellite Media Tour we predicted that, during a promotional window of 30 to, at most, 60 days after the online media tour aired, we would show a 10-15% increase in site visitors.

Performance data baseline and goals met are listed below for the project and additional information about the performance results is included in summary form.

Satellite Media Tour– Goal 6 million Viewers, 15-25 TV and Radio interviews with bookings at major affiliates, national cable and far-reaching syndicated programs, 3 targeted placements with top FOX affiliates, *Newswatch* placement, 60 second radio spot on two syndicated networks, and advertorial news minute for distribution on the internet.
Outcomes:

- Final audience over 10 million viewers/listeners
- 24 TV and Radio interviews
- 5 Targeted placement FOX Affiliates and placement on 2 networks
- Newswatch (TV Show) placement and results totaling over 3 million viewers
- Two syndicated radio shows (see below) included radio spots

- Advertorial news minute is available at the Wild Blueberries website where David Lieberman demonstrates a wild blueberry recipe

The Satellite Media Tour exceeded our expected goals in all categories. The Wild Blueberry Commission with Swardlick Marketing, set a goal of six million viewers/listeners and 15 to 25 TV and radio interviews of co-authors Lieberman and O'Connor. The final audience total for the Tour was approximately 10,250,000 listeners/viewers. The Satellite Media Tour reached the goal of airing the interview nationally in 15 to 25 TV and radio markets by airing 16 TV interviews in markets from Minneapolis, Minnesota to Rochester, New York and 8 radio interviews were also aired in urban markets such as Atlanta, Georgia and Phoenix, Arizona.

Satellite Media Tour targeted airings on three FOX TV affiliates and that goal was exceeded by airing in five FOX markets including Denver CO, Charlotte NC, Nashville TN, Columbus, OH, and Fort Myers, FL. The Satellite Media Tour also aired on ABC, and CBS affiliate stations. For our *Newswatch* placement the Tour aired in 176 ION cable network markets. Additionally DISH and DirecTV satellite networks aired in hundreds of markets with a total viewership on cable and satellite TV of over 3,500,000 viewers. The Tour also aired radio spots on syndicated shows What's Cookin on CRN Radio and DayBreak USA on USA Radio Network.

A few additional television and radio stations aired the show in early April 2010. Swardlick captured an advertorial minute with a wild blueberry recipe demonstration video by Chef Dave Lieberman that is posted on the wildblueberries.com website. A spreadsheet with the market data and a CD recording of a TV interview of the Satellite Media Tour is included with this report.

Food Page Feature Goal 6 million Readers
Outcomes:

- Over 7 million readers from print media publication
- Final audience of more than 20 million including online placements

The **Food Page Feature** was a broadly released print media publication. Swardlick Marketing Group tracks data for the Wild Blueberry Commission by tallying the circulation number of the print media publications. For the Food Page Feature we have received 446 orders from print media representing 7,057,714 in circulation. We did not include a definite number of online placements or newswire placements for the performance results in the SCBG proposal however; if we combine online placements with print media the coverage is tremendous. When we include online placements (420 representing almost 15,000,000 impressions), together with over 400 newspapers that have requested the "Wild About Blueberries" food feature, the feature has circulation of more than 20 million people.

National Public Service Announcement – Goal 10 million listeners, and 10 to 15% pick up out of 1000 radio stations
Outcomes:

- 17.1 million listeners
- 154 stations picked up the PSA – 15% of 1000 stations

Distribution of the **National PSA** was completed by March 2010 and additional outreach will be conducted by market over the next few months. By August the PSA aired on 154 (a 15% pick up) stations with audience of 17.1 million and had a calculated value of about $329,000 in donated media. The radio PSA's are "evergreen" and can be played anytime. The 60 second spot is available for listening online by visiting http://www.wildblueberries.com/news/video.php A CD that includes the 60 second, 30 second, and 15 second spots is included with this report.

Beneficiaries

The Power of Blue – Communicating the Nutritional Benefits of Wild Blueberries project was intended to benefit both consumers and producers of Maine wild blueberries. The Wild Blueberry Commission's intent is to increase consumption of the fruit to improve the health and wellbeing of children and adults and to educate them about the value of including wild blueberries in their daily diet. Growers and suppliers benefit from the promotion of wild blueberries' and their nutritional benefits by seeing an increase in their sales and competitiveness in the market.

In **The Power of Blue – Communicating the Nutritional Benefits of Wild Blueberries** proposal the Wild Blueberry Commission focused on tailoring messages to educate consumers about the importance of including fruit and colors in their daily diet, provide useful health information about food and nutrition, and increase awareness about the nutritional benefits of fruit, especially retail frozen wild blueberries. Our method of educating consumers was to make the greatest number of impressions as possible in various types of media to the most consumers in national urban, mid-size and smaller markets. We attained the goals we set for this project by communicating educational information about wild blueberries to over 22 million people. Our performance results indicate that by distributing this information to over 33 million people we exceeded our goal for the project by 50%. We are pleased to report these successful results for our project. In conjunction with the Wild Blueberry Association's annual promotional campaign, we intend to execute a Specialty Crop Block Grant funded Satellite Media Tour in 2011 and 2012 to consistently keep wild blueberry nutrition benefit information in front of consumers. As a long term goal we expect consumers to increase their consumption of fruit, particularly wild blueberries.

The Wild Blueberry Commission's goal was to promote the wild blueberry industry in the state of Maine and benefit 575 grower/producers and processors in the most cost effective way. By executing the Specialty Crop Block Grant project **The Power of Blue – Communicating the Nutritional Benefits of Wild Blueberries** in conjunction with our annual promotion and communication campaign we expect an increase in demand for the fruit over the long term.

The economic impact of increasing demand is to increase the sustainability of growers and producers of this Maine agricultural industry. The long term trend we anticipate is to increase the farm gate value of wild blueberries. By implementing this project in a cost effective way the

Commission continues to keep these important health and nutritional messages in front of consumers. Maine's wild blueberry growers and processors simply cannot afford a consumer advertising program that would build the level of consumer awareness that these media projects have achieved. Our continued success is more assured because this project was implemented in addition to the Wild blueberry Association annual promotion and communications campaign. **The Power of Blue – Communicating the Nutritional Benefits of Wild Blueberries** was kept on budget and consumer impressions added value to the Wild Blueberry Association's annual campaign at a cost of less than a ½ a penny per person (see attached spreadsheet). The cost per grower for the overall project consisting of the Satellite Media Tour, the Food Page Feature, and the National PSA was about $146 per grower for 2010.

The 2010 project proved to be a very cost effective method for the wild blueberry specialty crop business to develop and distribute a positive message on nutrition to children and adults nationwide. By combining this project with WBANA's comprehensive marketing campaign we expect to increase competitiveness, and consumer demand for and consumption of frozen wild blueberries

Lessons Learned

The lessons learned from this project included;

1. It is critical that agricultural groups utilize experienced contractor/teams with marketing and communication expertise to implement a project of this type.

2. Specialty Crop Block Grant funds allowed the Wild Blueberry Association to execute a promotional project that educates millions of consumers about the health and nutritional benefits of fruit and in particular wild blueberries.

3. We underestimated the reach that a consumer promotion program could have by 11 million and have real results showing how the popular online trend can impact communications and the spread of media.

4. This project was a cost effective way to communicate and educate about the health and nutritional benefits of fruits in general and wild blueberries specifically to a broad swath of the consumers nationally using multiple media outlets.

Contact Person

Patricia Kontur
207-581-1475

Pkontu71@maine.edu

Project Title: Specialty Crop Block Grant Promoting the Nutritional Benefits of Wild Blueberries through Social Media

Project Summary

The Wild Blueberry Commission proposed using Specialty Crop Grant funding for a project that uses interactive communication online to promote the fruit's health and nutritional benefits to adults and children nationwide. A "Twitter Party" promotion invested remaining grant funds from the 2009 Specialty Crop Block Grant during the spring of 2011 to develop a real time conversation about healthy eating habits and the benefits of frozen wild blueberries. This investment benefited Maine's 575 growers by expanding interactive educational efforts that result in consumers' consuming and buying more wild blueberries. Communicating the nutrition and health story was intended to build and increase demand and consumption and enhance competitiveness of wild blueberry products.

This activity occurred after a release of a food and healthy eating cookbook and a Satellite Media Tour in the spring of 2011. We took advantage of a unique partnership with Allison Fishman, Chef/Author of *You Can Trust a Skinny Cook* released earlier this year. Fishman was also a guest on the NBC Today Show in April 2011, to promote the release of her book. Our intent to increase the "buzz" and engage consumers in a real time conversation about healthy nutritious food and recipes and the availability of buying and consuming frozen wild blueberries throughout the year was successfully achieved through this activity.

Project Approach

Promoting the Nutritional Benefits of Wild Blueberries through Social Media 2009 Specialty Crop Block Grant project contractor, the Food *and Wellness Group* of Portland, Maine provided the Wild Blueberry Commission and WBANA performance measures including numbers of participants, "tweets", and impressions from the Twitter Party. Twitter Party results calculated impressions by counting the number of participants and their number of "tweets" multiplied by the number of their online followers.

The Twitter Party was a first time activity for Wild Blueberries that was designed to improve our presence in the social media world and encourage influential bloggers and those active in social media and interested in delicious healthy eating and recipes to discover wild blueberries and engage in an online conversation. Allison Fishman and eight influential men and women from the Twitter community across the country hosted the event and guided the party which involved over 180 participants and resulted in nearly 1600 Tweets over a 2 hour period. The conversation focused on healthy eating tips, Allison's cooking philosophy of bulking up recipes with lots of fruits and vegetables and the inclusion of key messages that championed Wild Blueberries as a

favorite ingredient for creating fantastic healthy dishes. We emphasized Wild Blueberries as antioxidant rich, the cornerstone of a healthy freezer, and smaller size for more berries per cup, delicious taste, and superior whole fruit integrity as key messages. Key topics and issues were introduced throughout the 2 hour conversation that would almost always lead back to Wild Blueberries as the perfect recipe solution for preparing healthy foods in the kitchen. We promoted the party with banner ads and everyone who participated followed the Wild Blueberry Association and liked us on Facebook™ and went in the drawing for Allison's new book.

The total impressions generated from the Twitter Party were an impressive 8.5 million impressions. The number of impressions is derived by first calculating the impressions from each participant. This is done by multiplying the number of times a participant tweets by his or her number of followers. The number of impressions from each participant is then added together to equal the total impressions. In conclusion, the Party was successful in generating conversation and social media impressions. However, we will continue to look for more and more opportunities to increase our relevance in social media so that the Wild Blueberries and the website are part of the healthy cooking, eating and lifestyle conversations that are relevant to our market.

A favorite quote from the Twitter party was from a Mom who defended the benefits of frozen in her kitchen over fresh**....** **"**Fresh fruit rocks, but frozen fruit, like Wild Blueberries, are like money in the bank".

Wild Blueberry Commission and Wild Blueberry Association partner, Food and Wellness Group, did an excellent job of developing the concepts to educate consumers about the health benefits of wild blueberries through the Specialty Crop Block Grant project. Though Swardlick Marketing Group was lined up to execute this project the group dissolved at the end of 2010 into the beginning of 2011 and transformed into the smaller Food & Wellness group. The Wild Blueberry Commission agreed to utilize their marketing services for 2011 and asked them to execute the Twitter Party project. The partnership with Allison Fishman and the influential blogger/twitterers provided information about health benefits to our target market group and were well received and successful nutrition education promotion project.

The Wild Blueberry Association's Satellite Media Tour during the same period of time provided an added boost to the Twitter Party project and met our objective of spreading the exciting news about availability of frozen fruit and the health benefits of consuming frozen as well as fresh produce.

Food & Wellness Group director Mike Collins provided the Wild Blueberry Commission and the Wild Blueberry Association marketing committee with tracking and reporting information. Association members were able to link to the wildblueberries.com website at http://www.wildblueberries.com/news/video-allisonfishman.php and see a video of Allison Fishman preparing a Wild Blueberry recipe. Collins also provided additional photos and highlighted tweets from the project.

Goals and Outcomes Achieved

At this time the Wild Blueberry Commission Specialty Crop Block Grant **Promoting the Nutritional Benefits of Wild Blueberries through Social Media** has been executed and completed. We successfully recruited 8 key bloggers to promote the Twitter Party. The bloggers in turn added their followers to generate the increased number of participants and impressions. Banner ads and the $250 prize giveaway generated a lot of interest from Party guests. Allison Fishman, Co-host of *Cook Yourself Thin* a Lifetime Channel cooking and nutrition show proved to be a successful choice for the combination of Twitter Party and Satellite Media Tour consumer promotion projects. The performance data goals were exceeded by millions of impressions. As anticipated, the Twitter Party took place in May 2011. Though the Party was projected to generate 5 million impressions, total results from the Twitter Party were an impressive 8.5 million impressions. One hundred eighty people participated in the party and they contributed 1,553 tweets during the two hour event.

In addition, based on data from May 2011, the www.wildblueberries.com website showed a 60% increase in visits and 80% increase in page views.

Beneficiaries

Promoting the Nutritional Benefits of Wild Blueberries through Social Media project was intended to benefit both consumers and producers of Maine wild blueberries. The Wild Blueberry Commission's intent is to increase consumption of the fruit to improve the health and well-being of children and adults and to educate them about the value of including wild blueberries in their daily diet. Growers and suppliers benefit from the promotion of wild blueberries' and their nutritional benefits by seeing an increase in their sales and competitiveness in the market.

In **Promoting the Nutritional Benefits of Wild Blueberries through Social Media** proposal the Wild Blueberry Commission focused on tailoring messages to educate consumers about the importance of including fruit and colors in their daily diet, provide useful health information about food and nutrition, and increase awareness about the nutritional benefits of fruit, especially retail frozen wild blueberries. Our method of educating consumers was to create the greatest number of impressions as possible through the Twitter social media. The 8.5 million impressions were generated in a two hour period of online time. In conjunction with the Wild Blueberry Association's annual promotional campaign, we also executed a Specialty Crop Block Grant funded Satellite Media Tour in 2011 to consistently keep wild blueberry nutrition benefit information in front of consumers. As a long term goal we expect consumers to increase their consumption of fruit, particularly wild blueberries.

The Wild Blueberry Commission's goal is promote the wild blueberry industry in the state of Maine and benefit 575 grower/producers and processors in the most cost effective way. By executing the Specialty Crop Block Grant project **Promoting the Nutritional Benefits of Wild**

Blueberries through Social Media in conjunction with our annual promotion and communication campaign we expect an increase in demand for the fruit over the long term.

The economic impact of increasing demand is to increase the sustainability of growers and producers of this Maine agricultural industry. The long term trend we anticipate is to increase the farm gate value of wild blueberries. By implementing this project in a cost effective way the Commission continues to keep these important health and nutritional messages in front of consumers. Maine's wild blueberry growers and processors simply cannot afford a consumer advertising program that would build the level of consumer awareness that these media projects have achieved. Our continued success is more assured because this project was implemented in addition to the Wild blueberry Association annual promotion and communications campaign. **Promoting the Nutritional Benefits of Wild Blueberries through Social Media** was kept on budget and consumer impressions added value to the Wild Blueberry Association's annual campaign.

Funds in the amount of $6,622 in the 2009 project budget enhanced the 2011 Satellite Media Tour (this grant was awarded at the end of 2010), also presented by Chef/author Allison Fishman. The 2011 project proved to be a very cost effective method for the wild blueberry specialty crop business to develop and distribute a positive message on nutrition. By combining this project with WBANA's comprehensive marketing campaign we expect to increase competitiveness, and consumer demand for and consumption of frozen wild blueberries

Lessons Learned

The lessons learned from this project include;

1. It is critical that agricultural groups utilize new forms of social media that can enhance and add value to the total marketing strategy for the members of the Wild Blueberry Association.

2. Specialty Crop Block Grant funds allowed the Wild Blueberry Association to execute a unique promotional project that educated thousands of consumers about the health and nutritional benefits of fruit and in particular wild blueberries.

3. We did not encounter any unforeseen challenges during the project.

4. We underestimated the added value that a social media consumer promotion could have on our total consumer promotion campaign. We now have real results showing how the popular online social media trend can impact communications and the spread of the health and nutrition message.

Contact Person

Patricia Kontur
Phone: 207-581-1475
Email: Pkontu71@maine.edu

Additional Information

- See hard copy of PowerPoint attachment

Project Title: Nutrient Management Assistance for Specialty Crop Producers

Project Summary

The primary purpose of this project was to assist specialty crop producers to improve safe food handling practices on their farms through better fertility practices. In many cases this resulted in obtaining and retaining Good Agricultural Practices (GAP) certification of their farm.

Traditionally, the high per acre value of specialty crops compared to the relatively low price of fertility options has resulted in growers using high rates of nitrogen and phosphorous fertility on their fields. The overuse of manures and composts on some farms has resulted in high phosphorous levels as well as high calcium levels resulting in the need for nutrient management strategies to balance the soil and crop nutrients. The dramatic increase over the past couple of years in fertilizer product prices (and in fuel for those that haul and spread volumes of manure/compost/biosolid fertilizer products) has caused farmers to question their past practices. Increasing awareness of the environmental concerns around excess nitrogen and phosphorous applications are certainly another factor. Also, the increased awareness of the relationship manure usage may have with food borne illnesses is leading farmers to learn new ways of providing fertility for their crops.

Nutrient management planning to livestock farmers has been supported in cost sharing programs through USDA-NRCS. Most specialty crop producers have not had access to this assistance. Good nutrient management planning requires knowledge of the interaction of crops and nutrients on both a site specific and crop specific basis. These are skills that most specialty crop producers need professional assistance with.

This project addressed numerous issues supported by NRCS in both this RFP and other programs. For this RFP, the issues of GAP, Enhanced Food Safety, and Sustainability of Farms were addressed. Nutrient management has been a national and regional USDA priority for over a decade now, principally supported by NRCS. The use of good nutrient management practices and "tools" are Risk Management components on farms that can improve the overall health and productivity of the crops. These are principle issues that USDA-RMA works with. Improved farm viability and market penetration is an issue that many USDA-RC&D offices work with.

Project Approach

Work with individual farms began in November of 2009, mainly to identify interested farms and begin to gather information, soil samples, manure analyses, and compost analyses. Soil sampling is traditionally done in the spring and fall of the year (before or after harvest).

Forty one (41) Nutrient Management Plans for Specialty Crop Growers have been completed. Farmers have received technical assistance to obtain appropriate soil, tissue, and nutrient analysis reports to facilitate nutrient management planning. The nutrient management plans for individual farms are both site specific and crop specific.

Soil, tissue, and/or nutrient samples have been collected as specifically needed for the crops grown and organic nutrient sources used. Farms have been responsible for soil sample collection or for hiring that they be taken and for the cost of and analysis of these materials as well as manure or compost analyses.

The analysis results have been used to compile nutrient management plans that are good for five years and comply with the rules and guidelines of the Maine Nutrient Management Law. This includes site specific and crop specific information regarding the use of crop fertilization materials, how they are stored, handled, and spread. Farmers have received instruction on how to best alter their fertility practices, if necessary, to comply with GAP and general food safety guidelines as well as environmental guidelines. Some planned changes may require follow-up soil or tissue sampling to calibrate and ensure the accuracy of recommendations. Pre-side dress nitrate soil testing is an example of this.

AgMatters LLC has advertised the benefits to growers of implementing recommendations of Nutrient Management Plans. Throughout the three year term of this grant, details about this free program have been shared at the Agricultural Trade Show, the Maine Pomological Society Meetings, the Maine Small Fruit and Vegetable Association Meetings, the Maine Sustainable Agriculture Association Meetings, Facebook, on our www.AgMattersllc.com website, on inserts sent to farms that have had GAP/GHP audits, and on business cards and posters.

The technical work of plan writing has been done by Lauchlin Titus, a Certified Professional Agronomist, and Jeremiah Titus, a Certified Maine Nutrient Management Planner. Administrative work and recordkeeping involved with this project was done by Linda Titus. The Maine Vegetable and Small Fruit Growers Association assisted with delivery of this program through word of mouth and invitation for us to speak at their meetings. Many farms that got NMP's are members of the MVSFGA.

Goals and Outcomes Achieved

We completed **41** nutrient management plans and 14 of these were for Maine Specialty Crop Producers who have been able to obtain GAP certification and/or entry into markets that require a level of safe food assurance as a result of the improved use of manure or other biosolid nutrients through good nutrient management planning.

Records were kept of farms that the project provided nutrient management plans for and annual summaries were submitted to track success of the project. A final report of the growers who received Nutrient Management Plans and which of those went on to receive GAP Certification is included at the end of this report.

Beneficiaries

The direct beneficiaries of the project were the producers. This project benefited **over 40** vegetable and small fruit specialty crop producers. They were able to competitively produce crops in a way that assures them entry into all markets in the area, especially those that require safe food handling assurance or certification. Nutrient management, when implemented, can result in improved yields and quality of the crops produced while at the same time effectively manage the monetary expenses for materials and labor to effectively utilize nutrient products.

The indirect beneficiaries of the project are consumers who now have access to produce that has an enhanced level of safe food assurance. The other beneficiary of this project is the environment through reduced losses from farms of nitrogen and phosphorous nutrients.

Lessons Learned

Farmer demand for this work in Maine has not met the original expectations we had when we wrote this grant. We anticipated we would actually end up with many more than 40 plans. As NRCS assistance in writing nutrient management plans in Maine diminished in the fall of 2011, we received several requests for NMPs for Specialty Crop Growers through them. At this time we believe that the need for this program has generally been met.

Contact information

AgMatters LLC
207-873-2108
www.agmattersllc.com

Additional Information

Appendix 1: Budget Expenditures

Total budget Nutrient Management Assistance for Specialty Crop Producers													
Month	Nov. 09	Dec. 09											
Salary	$333.43	$333.43											
Travel	$218.06	$218.06											
Supplies	$22.22	$22.22											
Other	$83.33	$83.33											
Indirect	$65.69	$65.69											
Total	$722.73	$722.73	$1,445.46										
			total 2009										
Month	Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10	Jul-10	Aug-10	Sep-10	Oct. 10	Nov. 10	Dec-10	
Salary	$333.43	$333.43	$333.43	$333.43	$333.43	$333.43	$333.43	$333.43	$333.43	$333.43	$333.43	$333.43	
Travel	$218.06	$218.06	$218.06	$218.06	$218.06	$218.06	$218.06	$218.06	$218.06	$218.06	$218.06	$218.06	
Supplies	$22.22	$22.22	$22.22	$22.22	$22.22	$22.22	$22.22	$22.22	$22.22	$22.22	$22.22	$22.22	
Other	$83.33	$83.33	$83.33	$83.33	$83.33	$83.33	$83.33	$83.33	$83.33	$83.33	$83.33	$83.33	
Indirect	$65.69	$65.69	$65.69	$65.69	$65.69	$65.69	$65.69	$65.69	$65.69	$65.69	$65.69	$65.69	total 2010
Total	$722.73	$722.73	$722.73	$722.73	$722.73	$722.73	$722.73	$722.73	$722.73	$722.73	$722.73	$722.73	$8,672.76
Month	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct. 11	Nov. 11	Dec-11	
Salary	$333.43	$333.43	$333.43	$333.43	$333.43	$333.43	$333.43	$333.43	$333.43	$333.43	$333.43	$333.43	
Travel	$218.06	$218.06	$218.06	$218.06	$218.06	$218.06	$218.06	$218.06	$218.06	$218.06	$218.06	$218.06	
Supplies	$22.22	$22.22	$22.22	$22.22	$22.22	$22.22	$22.22	$22.22	$22.22	$22.22	$22.22	$22.22	
Other	$83.33	$83.33	$83.33	$83.33	$83.33	$83.33	$83.33	$83.33	$83.33	$83.33	$83.33	$83.33	
Indirect	$65.69	$65.69	$65.69	$65.69	$65.69	$65.69	$65.69	$65.69	$65.69	$65.69	$65.69	$65.69	total 2011
Total	$722.73	$722.73	$722.73	$722.73	$722.73	$722.73	$722.73	$722.73	$722.73	$722.73	$722.73	$722.73	$8,672.76
Month	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12			
Salary	$333.43	$333.43	$333.43	$333.43	$333.43	$333.43	$333.43	$333.43	$333.43	$333.43			
Travel	$218.06	$218.06	$218.06	$218.06	$218.06	$218.06	$218.06	$218.06	$218.06	$218.06			
Supplies	$22.22	$22.22	$22.22	$22.22	$22.22	$22.22	$22.22	$22.22	$22.22	$22.22			
Other	$83.33	$83.33	$83.33	$83.33	$83.33	$83.33	$83.33	$83.33	$83.33	**$80.05**			
Indirect	$65.69	$65.69	$65.69	$65.69	$65.69	$65.69	$65.69	$65.69	$65.69	$65.69	Total 2012		
Total	$722.73	$722.73	$722.73	$722.73	$722.73	$722.73	$722.73	$722.73	$722.73	$719.45	$7,224.02		
											2009	**$1,445.46**	
											2010	**$8,672.76**	
											2011	**$8,672.76**	
											2012	**$7,224.02**	

												$26,015.00	
												Expended	
												Total Grant	

Appendix 2: Highlighted growers who also became/are becoming GAP/GHP Certified.

	Completed plans:	Town	Owner (s)
1	30 Acre Farm-Frost	Whitefield	Simon & Jane Frost
2	Anderson Farm	Dayton	Ed & Sarah LeBlanc
3	Bahner Farm	Belmont	Christa & Mike Bahner
4	Beckwith, Bill	Warren	Bill Beckwith
5	Belanger & Sons Farm	Lewiston	Richard Belanger
6	Belle Vue Farm	Readfield	Brian Baggott
7	Chase Farm	Freedom	Addison Chase
8	Chipman Farm	Poland	Doug Chipman
9	Fail Better Farm	Etna	Clayton Carter
10	Cleaves Farm	Sangerville	Charlie & Bill Cleaves
11	Crestholm Farm	Oxford	Brian Hall
12	Freedom Farm	Freedom	Daniel & Ginger Price
13	Gillespie Farm (Pineland)	New Gloucester	Greg Gillespie, manager
14	Grant Farm	Saco	Richard Grant
15	Green Earth Gardens	Unity	Tim Christianson
16	Moorebrook Farm	Scarborough	Stewy Harmon
17	Harris Family Farm	Dayton	Clint & Rachel Harris
18	Hatchet Cove Farm	Warren	William Pleucker/Reba Richardson
19	Horsepower Farm	Penobscot	Paul Birdsall
20	Johnny's Seeds	Albion	Brian Milliken
21	Lavigne Farm	Sanford	Patrick & Albert Lavigne
22	Long Shadow Farm	Morrill	
23	Maxwell's	Cape Elizabeth	Bill & Lois Bamford
24	McCoy Farm	Montville	McCoy, Michael & Kiley
25	Merryman Farm	Brunswick	John Merryman
26	Morning Dew Farm	Newcastle	Brady Hatch
27	Peacemeal Farm	Dixmont	Mark Guzzi
28	Rhames Farm	Biddeford	Rhames, Richard
29	Frugal Farmers	Buxton	Richards, Bruce
30	Seaman Farms	Litchfield	Seaman, Eric
31	Lakeside Family Farm	Newport	Smith, Stewart
32	Snell's Family Farm	Bar Mills	John & Roberta Snell
33	Spear Farm	Nobleboro	Bob Spear & Family
35	Stutzman's Farm	Sangerville	Sid & Rainie Stutzman
36	Thomas Farms	Corinth	Paul Thomas

37	True Farms (was) Osborne Family Farm (now)	Charleston	Gordon True Jason Osborne
38	Village Farm	Freedom	Prentice Grassi & Polly Shyka
39	White Oak Farm	Warren	Vincent & Beth Ahlholm
40	Sugarloaf View Farm	Madison	Anthony Shusta
41	Weston's Rivercroft Farm	Fryeberg	George Weston